

§ 63.8243

monitor in continuous operation according to the site-specific monitoring plan.

(b) If you choose the periodic monitoring option and your final control device is not a nonregenerable carbon adsorber, you must install, operate, and maintain a continuous parameter monitoring system (CPMS) for each parameter specified in § 63.8232(f)(1), according to § 63.8(c).

§ 63.8243 What equations and procedures must I use to demonstrate continuous compliance?

(a) *By-product hydrogen streams and end box ventilation system vents.* For each consecutive 52-week period, you must determine the g Hg/Mg Cl₂ produced from all by-product hydrogen streams and all end box ventilation system vents, if applicable, at a mercury cell chlor-alkali production facility using the procedures in paragraphs (a)(1) through (3) of this section. You must begin collecting data on the compliance date that is specified in § 63.8186 for your affected source and calculate your first 52-week average mercury emission rate at the end of the 52nd week after the compliance date.

(1) Each week, you must determine the weekly mercury emission rate in grams per week for each by-product hydrogen stream and for each end box ventilation system vent, if applicable, using one of the monitoring options in paragraph (a)(1)(i) or (ii) of this section.

(i) Continuous mercury monitoring according to §§ 63.8242 and 63.8244(a).

(ii) Periodic monitoring according to § 63.8244(b).

(2) Each week, you must determine the chlorine production and keep records of the production rate as required under § 63.8256(b)(6).

(3) Beginning 52 weeks after the compliance date specified in § 63.8186 for your affected source, you must calculate the 52-week average mercury emission rate from all by-product hydrogen steam and all end box ventilation system vents, if applicable, using Equation 1 of this section as follows:

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$$E_{\text{Hg}} = \sum_{i=1}^{52} \left[\frac{(R_{\text{week}_i})}{(P_{\text{Cl}_2, \text{week}_i})} \right] \quad (\text{Eq. 1})$$

Where:

E_{Hg} = 52-week average mercury emission rate for week_i, g Hg/Mg Cl₂;

R_{week_i} = Mercury emission rate for week_i from paragraph (a)(1) of this section, g Hg per week;

$P_{\text{Cl}_2, \text{week}_i}$ = Amount of chlorine produced during week_i, from paragraph (a)(2) of this section, Mg Cl₂ per week.

(b) *Mercury thermal recovery units.* If you choose the continuous monitoring option in § 63.8240(a), you must demonstrate continuous compliance using paragraph (b)(1) of this section. If you choose the periodic monitoring option in § 63.8240(b), you must demonstrate continuous compliance using paragraph (b)(2) of this section.

(1) You must calculate the daily average mercury concentration using Equation 2 of this section as follows:

$$C_{\text{Hg, dailyavg}} = \frac{\left(\sum_{i=1}^n C_{\text{Hg}, i} \right)}{n} \quad (\text{Eq. 2})$$

Where:

$C_{\text{Hg, dailyavg}}$ = Average mercury concentration for the operating day, milligrams per dry standard cubic meter;

$C_{\text{Hg}, i}$ = Concentration of mercury measured at the interval *i* (i.e., 15 minute reading) using a mercury continuous emission monitor, milligrams per dry standard cubic meter; and

n = Number of concentration measurements taken during the operating day.

(2) You must calculate the daily average mercury concentration using the procedures in § 63.8234(b).

§ 63.8244 How do I monitor and collect data to demonstrate continuous compliance?

(a) *Continuous monitoring option.* You must monitor mercury concentration according to § 63.8242(a) at all times that the affected source is operating with the exception of paragraphs (a)(1) and (2) of this section.

(1) Except for monitor malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks

and required zero and span adjustments), you must monitor mercury emissions continuously (or collect data at all required intervals) at all times that the affected source is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

(2) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels or to fulfill a minimum data availability requirement, if applicable. You must use all the data collected during all other periods in assessing compliance.

(b) *Periodic monitoring option.* If you choose the periodic monitoring option under § 63.8240(b), you must monitor according to the procedures in paragraph (b)(1) or (2) of this section.

(1) If your final control device is a nonregenerable carbon adsorber, then you must conduct at least three test runs per week meeting the criteria specified in § 63.8232(c)(1) and (2) to measure mercury emissions using the test methods specified in § 63.8232(d). Alternatively, you may use any other method that has been validated using the applicable procedures in Method 301, 40 CFR part 63, appendix A.

(2) If your final control device is anything other than a nonregenerable carbon adsorber, you must monitor according to the requirements of paragraphs (b)(2)(i) through (v) of this section.

(i) You must conduct at least three test runs per week meeting the criteria specified in § 63.8232(c)(1) and (2) to measure mercury emissions using the test methods specified in § 63.8232(d). Alternatively, you may use any other method that has been validated using the applicable procedures in Method 301, 40 CFR part 63, appendix A.

(ii) Except as specified in paragraph (b)(2)(iii) of this section, you must continuously collect data at least once every 15 minutes using a CPMS installed and operated according to § 63.8242(b) and record each 1-hour aver-

age from all measured data values during each 1-hour period for the applicable parameter identified in § 63.8232(f)(1) using the methods specified in § 63.8244(a).

(iii) As appropriate, you must continuously monitor the temperature specified in § 63.8232(f)(1)(vii) during each heating phase of the regeneration cycle of your carbon adsorber.

(iv) If the hourly average monitoring value of any applicable parameter recorded under paragraph (b)(2)(ii) of this section is below the minimum monitoring value or above the maximum monitoring value of that same parameter established under § 63.8232(f)(2) for 24 consecutive hours, your monitoring value is out of range and you must take corrective action as soon as practicable. The hourly average monitoring value must be above the minimum monitoring value or below the maximum monitoring value as appropriate for that parameter, within 48 hours of the period that the monitoring value is out of range.

(v) If your final control device is a regenerative carbon adsorber, when the maximum hourly value of the temperature measured according to paragraph (b)(2)(iii) of this section is below the reference temperature determined according to § 63.8232(f)(2) for three consecutive regeneration cycles, your monitoring value is out of range and you must take corrective action as soon as practicable. During the first regeneration cycle following the period that your monitoring value is out of range, the maximum hourly value must be above the reference temperature recorded according to § 63.8232(f)(2).

§ 63.8246 How do I demonstrate continuous compliance with the emission limitations and work practice standards?

(a) *By-product hydrogen streams and end box ventilation system vents.* (1) For all by-product hydrogen streams and all end box ventilation system vents, if applicable, you must demonstrate continuous compliance with the applicable mercury emission limit by reducing the mercury emissions data to 52-week averages using Equation 1 of § 63.8243 and maintaining the 52-week average